

OIB - P-3 Orion 11/22/17 Science Report

Aircraft: [P-3 Orion - WFF](#) ([See full schedule](#))

Date: Wednesday, November 22, 2017

Mission: OIB

Mission Location: Ushuaia, Argentina

Mission Summary:

Mission: Sea Ice - TanDEM-X B (priority: N/A)

This is a coordinated flight with the TanDEM-X spacecraft, and is also similar to the baseline-priority Seelye Loop North flight. It is intended both to improve spatial coverage of sea ice conditions in the west-central Weddell Sea, and also to gain additional near-synchronous data collection with TanDEM-X in coordination with the OTASC experiment.

A very persistent storm system in the eastern Weddell Sea has frustrated all of our efforts to obtain any sea ice coverage in that area, and it did so again today. The entire Bellingshausen sector was clouded today as well, and weather over the northern Peninsula and Larsen-C was marginal. However the western half of the Weddell Sea was almost entirely clear, with only a few cirrus clouds extending into the area from the storm system to the east. Once again the HRPT satellite imagery provided by our friends at Rothera Station was extremely helpful in confirming this, as was our own MODIS Rapidfire imagery. Thus well-informed, we launched this mission confident of obtaining science data over most or all of the flight line. In the event we experienced excellent conditions throughout the flight, with just a few dozen miles of wispy fog near the south end which had little effect on the instruments.

Science instruments mostly performed well, but the snow radar apparently was degraded by incoherent noise for portions of the last 25% of the survey line. ATM T7 experienced a few unplanned shutdowns, perhaps due to higher-than-normal cabin temperatures, but an insignificant amount of data was lost as a result. Successful data collection over the entire line was very near 100%.

Data volumes

ATM T6: 58 Gb

ATM T7: 66 Gb

FLIR: 7.0 Gb

Cambot: 20 Gb

KT19: 12 Mb

DMS: 45 Gb

MCoRDS: 0 Gb

Gravity/Magnetometer: 3 Gb

Accumulation radar: 154 Gb

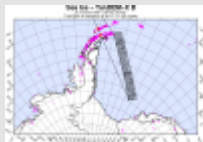
Snow/Ku radar: 605 Gb

data on: 1655

data off: 1957

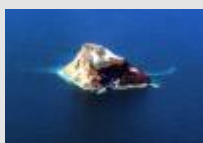
Images:

Map of Sea Ice - TanDEM-X B



[Read more](#)

Bridgeman Island



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Weddell icebergs



[Read more](#)

Flooded sea ice



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Rafting



[Read more](#)

Submitted by: John Sonntag on 11/22/17

Related Flight Report:

P-3 Orion 11/21/17

Flight Number: OIB-Ushuaia Science Flight #8

Payload Configuration: OIB - Ushuaia 2018

Nav Data Collected: No

Total Flight Time: 9.4 hours

Submitted by: Kelly Griffin on 11/24/17

Flight Segments:

From:	SAWH	To:	SAWH
Start:	11/21/17 12:42 Z	Finish:	11/21/17 22:04 Z
Flight Time:	9.4 hours		
Log Number:	18P006	PI:	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		

Flight Hour Summary:

	18P006
Flight Hours Approved in SOFRS	151
Total Used	156
Total Remaining	-5

18P006 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
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10/17/17	OIB - Airworthiness Test Flight	Check	1.1	1.1	149.9
10/18/17	OIB - Project Test Flight	Check	3.5	4.6	146.4
10/19/17	OIB PTF - Radar	Check	4.5	9.1	141.9
10/23/17	OIB - Transit leg #1	Transit	7.1	16.2	134.8
10/24/17	OIB - Transit leg #2	Transit	6.5	22.7	128.3
10/25/17	OIB - Transit leg #3	Transit	7	29.7	121.3
10/29/17 - 10/30/17	OIB-Ushuaia Science Flight #1	Science	9.7	39.4	111.6
10/31/17	OIB-Ushuaia Science Flight #2	Science	8.9	48.3	102.7
11/03/17	OIB-Ushuaia Science Flight #3	Science	9	57.3	93.7
11/04/17	OIB-Ushuaia Science Flight #4	Science	9.3	66.6	84.4
11/12/17	OIB-Ushuaia Science Flight #5	Science	9.5	76.1	74.9
11/14/17	OIB-Ushuaia Science Flight #6	Science	9.8	85.9	65.1
11/16/17	OIB-Ushuaia Science Flight #7	Science	9.1	95	56
11/21/17	OIB-Ushuaia Science Flight #8	Science	9.4	104.4	46.6
11/22/17 - 11/23/17	OIB-Ushuaia Science Flight #9	Science	9.9	114.3	36.7
11/24/17	OIB-Ushuaia Science Flight #10	Science	9.6	123.9	27.1
11/25/17 - 11/26/17	OIB-Ushuaia Science Flight #11	Science	9.5	133.4	17.6
11/27/17	OIB-Ushuaia SAWH-SCDA Transit Flight	Transit	7	140.4	10.6
11/28/17	OIB-Ushuaia SCDA-MROC Transit Flight	Transit	7	147.4	3.6
11/29/17	OIB-Ushuaia MROC-KNGU Transit Flight	Transit	6.3	153.7	-2.7
11/29/17	OIB-Ushuaia KNGU-KWAL Transit Flight	Transit	0.8	154.5	-3.5
12/04/17	OIB-Post Mission Calibration Flight	Science	1.5	156	-5

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

Page Last Updated: April 22, 2017

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